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Background

The following pages contain draft abstracts of papers that the National Endowment for the Arts' Office of Research & Analysis commissioned with Michael Rushton, Associate Professor of Indiana University and Co-Editor of the *Journal of Cultural Economics*.

It is expected that the papers and abstracts will be refined for publication based on feedback received before, during, and after the Brookings Institution event, "The Arts, New Growth Theory, and Economic Development," May 10, 2012, in Washington D.C.

Below is the original call for papers that was issued on October 17, 2011.

- In conjunction with the National Endowment for the Arts, a symposium on "The Arts, New Growth Theory and Economic Development" will be held in May 2012 in Washington D.C. The symposium will bring together researchers to identify how new developments in economic growth theory over the last two decades might inform our understanding about whether arts-related investments play a role in stimulating economic activity at the local, regional, and/or national levels. Such investments may include, for example, the creation of arts districts, the construction of performing arts centers and museums, and arts-favorable tax policies and other incentives for productivity and innovation in fields such as architecture and design, visual and performing arts, and literary and media arts.

  Submissions: Researchers should send an abstract and contact information to Michael Rushton, School of Public and Environmental Affairs, Indiana University at mirushto@indiana.edu by December 13, 2011.

Capital of Culture? An Econometric Analysis of the Relationship between Cultural Clusters and Productivity in English Cities

Hasan Bakhshi and Juan Mateos-Garcia, Nesta, and Neil Lee, The Work Foundation and Lancaster University

In recent years, scholars and consultants have argued that the arts and cultural sector can boost productivity in other sectors of the local economy through two main mechanisms: first, by creating urban environments that attract professionals with high levels of human capital and their innovative, high-growth employers; and second, by supplying other parts of the local economy (in particular, commercial creative firms) with new ideas and skills that enhance innovation.

Although these arguments have justified policies for creative placemaking, urban branding, and public investments in signature buildings and dedicated cultural districts, the evidence base underpinning them is still sparse, and mostly confined to the United States. Additionally, little is known about the relative importance of different mechanisms and types of cultural clustering (occupational or industrial) in boosting local productivity.

In this paper, we seek to address these gaps in the literature by building an econometric model that explores the impact of cultural clusters on the productivity of English cities, drawing on a well-established body of literature on urban wage premiums and human capital externalities. Our model tests the impact of cultural agglomeration on worker wages (which act as a proxy for productivity) at the city level. We use three measures of cultural clustering (cultural sector employment, cultural occupation, and cultural institution clustering), constructed with official labor force and business register survey data, and a unique dataset of almost 5,000 UK cultural institutions. We control for important individual and city level characteristics.

Our initial results show a positive relationship between cultural clustering and average wages in English cities: English cities in the 90th percentile of cultural employment clustering have average hourly wages of £12.48, which is £1.11 higher than the average wage for cities in the 10th percentile. However, once we control for individual characteristics (particularly skills as proxied through an individual's qualifications), the coefficients for two out of our three measures of cultural clustering (cultural sectors and institutions) become significantly negative, while the cultural occupation coefficient becomes insignificant. We tentatively interpret this "negative cultural urban wage premium" as evidence of a compensating differential. In other words, workers may, other things equal, be willing to take a wage cut to reside in cities with relatively more cultural amenities, as these contribute to its quality of life – its "livability" and "lovability."

We also use our econometric model to examine the relationship between worker wages and measures of creative clustering (focusing on employment and occupations in commercial creative industries). In this case, we find evidence of a wage premium in "creative cities" even after controlling for individual skills – this is particularly the case for cities with strong creative occupational clustering, rather than creative industry clustering. Although caution is advised in the interpretation of this finding given the obvious potential endogeneity biases, it seems to tentatively lend support to the views of proponents of "occupational," as opposed to, "industrial" targeting to support urban development.

Finally, we test the impact of cultural clustering on the wages of workers in the local "commercial" creative industries, bearing in mind the literature's emphasis on knowledge spillovers across related – rather than distant – industrial domains. Here, we find some evidence that creative workers in cities with high levels of cultural clustering enjoy a wage premium, which suggests that not-for-profit arts and cultural sectors may generate knowledge spillovers into the commercial creative economy. Once again, these results should be seen as indicative at best, as the direction of causality could be the opposite (a vibrant arts and cultural scene emerges in places with more productive creative clusters).

The tentative conclusion from our analysis is that, although English data support a relationship between cultural clustering and urban development, the relationship appears to be subtler than generally acknowledged. In particular, the economic impact of public investments in urban arts and cultural infrastructure may be manifest in improvements in the productivity (and wages) of creative professionals.

Culture Shocks and Consequences: The Connection between the Arts and Urban Economic Growth

Stephen Sheppard, Williams College

Is there a relationship between local arts and culture production and local prosperity that is permanent rather than transitory? The answer to this question determines whether arts and culture production generates economic growth or a temporary multiplier effect that diminishes over time. We argue that, despite obvious public policy interest in the subject, there has been no fully satisfactory empirical analysis of this question. In this paper, we provide a model that allows us to think systematically about the problem and an empirical methodology capable of testing relevant hypotheses concerning possible answers to the question. We identify data to which these methods can be applied, using per capita GDP and expenditure levels of arts and culture production by not-for-profit organizations in US urban areas. Our analysis suggests that the impact of arts and culture production is not transitory. Shocks to local arts and culture production generate impacts that alter the local economy and change steady-state GDP.

The Arts as a Growth Engine? Evidence from Selected Metropolitan Areas

Charles Gray, University of St. Thomas

Arts advocates in the United States, seeking to justify continued public support for the arts, have in recent years proffered the "economic impact" argument. Emboldened by Richard Florida's work on creativity, and implicitly incorporating the "new growth theory," advocates contend that the arts generate both short- and long-run economic growth. In the short run, so goes the argument, arts participants (attendees) spend on the arts and such related activities as restaurant meals, generating a multiple expansion in employment and income, with desirable tax revenue and other consequences.

In the longer run, the arts are seen as contributing to a creative environment that fosters innovation and growth and promotes a quality of life that attracts or retains talented human capital, thereby contributing to endogenous economic expansion. Thus the arts may be regarded as a potential investment of public moneys, with a return not unlike other public investments.

This project develops the theoretical underpinning of these economic growth arguments, generates corresponding hypotheses, and submits them—several times—to fairly straightforward empirical tests.

"Basic" economic activity, which is responsive to external demand sources, generates multiple expansion of overall economic activity.

The multiplier relationship can be written as follows:

$$E_t = kE_b$$

where E is some measure of economic activity (employment, output, income, etc.), k is the multiplier, t represents total for the area, and b represents the basic sector. If in some sense an expansion of the basic sector causes multiple expansion in the region, then the induced expansion follows the initial thrust and extends over time. This can be more completely represented as:

where the subscripts and superscripts i, $i\text{-}1$, etc., represent lagged time periods.

$$E_t^j = k_j E_b^i + k_{j-1} E_b^{i-1} + k_{i-2} E_b^{i-2} + \ldots$$

Economists have historically regarded the arts as *nonbasic* i.e., an element of induced local spending (Seaman, 1987; Rushton, 2006). A "Granger causality" test over a relatively short time span can offer some evidence to this effect. A similar test over a longer time span should offer evidence of endogenous growth linked to arts measures.

The data used for this study are "Personal Income by Major Source and Earnings by Industry (NAICS version)," collected by the U.S. Department of Commerce, Bureau of Economic Analysis, and available online at http://www.bea.gov/regional/reis/ . For the purposes of this paper, the measure of local economic activity is total personal income, which is simply the sum of all sources of income for each metropolitan area. The proxy for arts-related income is comprised of summed earnings in these three components: amusement and recreation services; motion pictures; and museums, botanical, or zoological gardens. While these do not correspond precisely to the arts sector, the theoretical relationships will be the same (Seaman, 2003). The 15 metropolitan areas are defined by the most recent county aggregations.

The fundamental questions can be stated as follows:

• Does growth in arts-related local economic activity (ART) *cause* growth in overall local economic activity (TOT)? This would reflect the contentions of some arts advocates and be consistent with the new growth theory.

• Does growth in overall local economic activity (TOT) *cause* growth in arts-related local economic activity (ART)? This would be more consistent with the prevailing perspective among cultural and regional economists.

Earlier results are decidedly mixed, but generally fail to support the economic impact (endogeneity) contention in 13 out of the 15 metropolitan areas. Although the latest results are not yet complete, preliminary indications are consistent with earlier findings.

Arts-Based Entrepreneurship in the New Economy and the Competition State: Developing Policy Options to Fit a Different Context

Margaret J. Wyszomirski and Woong Jo Chang, The Ohio State University

Since the establishment of ongoing public funding for the arts in the U.S., support for individual artists has been a key part of the mission of public arts agencies and they have addressed this concern through a variety of program instruments. At least since the popularization of economic impact studies of the arts starting in the late 1970s, the contribution of arts-related activities to the overall economy has led to numerous and varied creative city and creative industry initiatives. Most of these initiatives have been premised on an industrial organization structure applied to a non-profit patronage operating model. This has been combined with a tendency to view artists as economically vulnerable individuals requiring subsidy, while overlooking their economic value as human capital, entrepreneurs, or small businesses. In effect, policy discussions about the role of the arts and especially artists in the new-growth-theory framework are impeded by two conflicting discourses: an artistic discourse that valorizes individual artists as creative capital; and an economic discourse that is stuck on an industrial model of the post-industrial world.

In this study, we use both quantitative data available nationwide, such as the *Arts & Economic Prosperity* and *Creative Industries* reports by the Americans for the Arts, and qualitative data derived from local small arts organizations and from an historical review of cultural policy concerning individual artists. We argue that in practice many artists have been pursuing a non-industrial model of economic productivity, but that this practice has seldom been supported by arts policy. Recently, this alternative has been called the “new artisan model.” The artisan has been recognized with regard to other handcraft or boutique industries such as breweries, coffee-shops, and alternative transportation (cycling). When referring specifically to the arts, we call it the “arts-based entrepreneur model.” This model emphasizes entrepreneurship and the utility of technology in reaching adequate markets but requires adjustment to better fit the case of arts-based, high creativity value-added enterprises. The arts-based entrepreneur approach attempts to reformulate both the “issue” of providing public support for artists and the “potential solutions” for implementing such cultural policies. We note that the arts-based entrepreneur model intersects with creative city initiatives through an emphasis on localized cultural activities, and that it fits into the creative and cultural industries framework.

ArtSmarts: Arts and Crafts Participation Correlates with Entrepreneurial Innovation among Scientists and Engineers

Robert Root-Bernstein, Michigan State University

How can the arts contribute to economic development? We have taken an unusual, if not unique, approach to this question by asking whether formal and informal education in arts and crafts prepares individuals to become entrepreneurial innovators who contribute to the economy by producing patentable inventions and founding new companies. The short answer appears to be "yes!"

We have surveyed four groups of engineers and scientists regarding arts and crafts participation in childhood, young adulthood, and mature adulthood: 1) engineers at a number of universities; 2) innovators who have been awarded Michigan Economic Development Corporation (MEDC) funds to start new high-tech companies; 3) scientists and engineers who graduated from the Michigan State University Honors College between 1990 and 1995; and 4) members of the United States National Academy of Engineering. We correlated responses concerning arts and crafts participation to number of publications, patents, and companies founded. We also compared the rates of arts and crafts participation between groups.

We have found that the more eminent the group, the greater its arts and crafts participation. Members of the National Academy had far greater rates of participation in arts and crafts across their lifetimes than did Honors College graduates and MEDC fundees, and both of these groups had significantly greater participation than the average scientist or engineer. In addition, several measures, most significantly continuous participation in one or more arts and crafts across a lifetime, correlated highly with number of publications, number of licensed patents, and number of companies founded. Most telling were interview responses in which the majority of scientists and engineers attributed their entrepreneurial skills at least in part to their arts and crafts avocations and advocated increased exposure of engineering and scientific students to arts and crafts to improve their innovative ability.

In sum, entrepreneurial high-tech innovators tend to have significantly higher rates of participation in arts and crafts throughout their lifetimes than do their less entrepreneurial and innovative colleagues, and the most successful attribute some of their entrepreneurial and innovative skill to arts and crafts experiences.

Formal and informal arts and crafts education may therefore be a catalyst in stimulating a knowledge economy. Indeed, insofar as economic growth depends on innovators, and insofar as innovators find creative nourishment in the lifelong exercise of arts and crafts, deeper investments may appropriately target formal and informal arts and crafts education for young and old alike, as well as funding of participatory arts and crafts programs that connect professional with avocational practitioners in ongoing community and practice.

Arts Districts, Universities, and the Rise of Media Arts

Shiri M. Breznitz and Douglas S. Noonan, Georgia Institute of Technology

This paper analyzes the impact of two possible (and possibly complementary) local clusters of investment and economic development: arts districts and universities. Specifically, we focus on their impact on economic development of and employment in media arts occupations. After reviewing the new economic growth theory for arts- and university-related investments, we offer some descriptive evidence of the impacts of arts districts and universities in select metropolitan areas on the development of the media arts subsector. We do this with a quantitative analysis of the changes in employment in new media arts occupations and growth in media arts-related innovations associated with the presence of arts districts and universities. The story highlights the roles of public investments and policy in crafting successful and sustained developments.

We estimate a variety of statistical models to identify systematic patterns of economic development in the media arts subsector across a large sample of major metro areas. The quantitative analysis uses data from the Current Population Survey (CPS) and from U.S. patent databases at various years, coupled with the location of "R1" universities and arts districts formed prior to 2000. We use the CPS employment data from 1989-2011. We use patent data from a similar time span to measure innovators in media arts technologies by their city and, as a further refinement, whether the patents are held by universities. Frost-Kumpf (1998) lists over 90 US cities with arts districts, and Strom (2002) indicates 71 major cultural facilities being built or renovated between 1985-2005. These (universities, arts districts) investments are seen as "treatments" that are hypothesized to affect long-term development of arts-related activities. Simple statistical inferences in this context will be limited by obvious endogeneity concerns. We implicitly control for economy-wide influences by measuring media arts employment and innovation as shares of overall employment and innovation in the city. Similar to a difference-in-difference estimator employed to mitigate endogeneity and omitted variable concerns, our preliminary analysis explains how trends in those shares differ by treatment. Finally, we examine whether the combination of major universities and an arts district in the same area yield larger or smaller effects on media arts employment and innovation.

Overall, in this simple model, research universities in the urban area (rather than in the same city itself) seem to have the strongest effects on media arts-related employment. With respect to patenting, the story is even more clear: cultural districts promote more media arts patenting and faster growth in innovation in that sector, and R1 universities typically do not differentially favor media arts patenting. Further, there do not appear to be consistently significant interaction effects between districts and universities. It seems that universities play a major role in developing arts and cultural industries by attracting and training artists and media arts-related labor, while cultural districts attract innovative entrepreneurs in the related field of media arts.

Arts, Innovation and Regional Development: A Consumption Base Approach
Ann Markusen, University of Minnesota

Economic development strategy at the regional/state/local levels has been dominated by economic base theory, which posits that exports drive overall growth levels. Because large portions of arts creation, production and presentation are consumed locally, arts advocates find it difficult to assert that arts capacity and programming can produce sustained growth and jobs, except via tourist attraction or art exports from the region. Following a review of export base theory and its uses, this paper argues that consumption base investments can create sustained jobs and growth by 1) offering residents opportunities to spend more of their discretionary income locally; 2) seeding innovations that may expand to export markets in time; 3) nurturing organizations and occupations that re-spend more of their earnings locally than do other sectors; and 4) attracting and retaining entrepreneurs, firms and workers, a supply-side growth stimulus.

The paper uses cross-sectional data on California and other U.S. cities, metros, and regions to show that 1) high differential rates of arts organizations per capita exist at both regional and city levels; 2) arts participation rates vary markedly among regions; and 3) the metro density of artists (including self-employed) varies substantially. Regression of arts organizational presence and arts participation on a set of resident socioeconomic and local economy characteristics finds that differentials cannot be fully explained. Furthermore, comparing the Los Angeles and San Francisco Bay regions, there is no evidence that the concentration of for-profit cultural industries in Los Angeles is accompanied by comparable nonprofit arts activity, either offerings or participation.

The paper concludes by hypothesizing that over the longer-run, evolutionary capacity-building by individuals and organizations can create a nonprofit arts and cultural sector that contributes sustainably to jobs and incomes as well as providing the intrinsic values of the arts. This process succeeds in large part because area residents are envisioned to be its participants, not outsiders. Among the California regions, the San Francisco Bay area is a particular standout, with its arts participation rates, thick nonprofit arts organizational presence (in numbers and aggregate budgets), and shares of employed artists far above what can be explained by demographic factors, economic roles, or the presence of cultural industries. This possibility is buttressed with a short explication of one rural small town’s successful effort to reverse long-term decline by investing in a locally-targeted arts center.

New Enterprise Formation and Cultural Participation in American Counties
Roland J. Kushner, Muhlenberg College

Entrepreneurial activity in the arts is consistent with several broad theoretical themes relating to development at both the broad macro level and at a community level. Social enterprise theory (e.g., Brooks 2008) posits that new ventures emerge when entrepreneurs create firms, even in the face of non-distribution. New growth theory (e.g., Romer 1994) suggests that economic growth is a function of endogenous activity such as investments in human capital or innovation. The arts are an outstanding setting to explore the nexus of these two themes, as a nonprofit sector industry where entrepreneurial behavior, and recognition by managers of the reliance on earned income, are increasingly recognized as critical underpinnings of success in the face of declining philanthropic support for the arts. Estimating total demand is typically part of enterprise development in both investor-owned and nonprofit firms. In the arts, entrepreneurs might try to understand cultural demand and participation among their other organizing steps. Thus, analysis of the relationship between demand for cultural activity on the one hand, and new enterprise formation in the arts on the other, is a fruitful area for empirical study.

The proposed paper for the NEA symposium would use data that shed light on these issues. Both of them are at the county level. IRS Form 990 data from the National Center for Charitable Statistics (NCCS) include the date for IRS recognition, a proxy for when an enterprise formed. Dates of January 2000 or later designate “millennial” arts nonprofits in every county. Data from Scarborough Research is based on over 200,000 consumer interviews every year regarding various consumer behaviors, and is typically used by advertisers trying to target their advertising buys. Scarborough data include percentages of the county population who participate in arts and culture.

These percentages can be summed to make an overall county-level index of cultural participation that acknowledges cultural omnivores who engage in multiple types of activity. An empirical regression or correlation model would test a preliminary hypothesis that higher levels of demand for arts and culture coincide with higher levels of new enterprise formation in the arts. This concept would be tested by relating the market share of millennial arts nonprofits to this index of cultural participation, controlling for socioeconomic, demographic, and other county characteristics. The presentation would be based in a more comprehensive literature review of both social enterprise and new growth theory.

Funding the Arts to Stimulate Economic Development: The Adams Grant Program in Massachusetts

Richard G. Maloney, Boston University, and Gregory H. Wassall, Northeastern University

Over the past two decades, the role of art and culture in economic development has emerged as an important area of concern for arts administrators and an interesting topic of inquiry among social scientists. Beginning in Western Europe, this trend has increasingly gained recognition in North America. The existing literature on this topic, which is now quite extensive, contains works that range from semi-popular to purely academic. However, one important issue that remains largely under-addressed is that of causality.

Large-scale examples of the synergy between art, culture and economic development can be easily cited. United States cities such as Los Angeles, Las Vegas, New York and Orlando have economies that depend heavily on spending on art, culture, and entertainment. However, examples such as these are uncommon. All major urban areas have cultural components to some degree, but are they a consequence or a cause of their current status? And to what extent can government intervene to use art and culture as a development tool? Small-scale and one-time examples, such as the economic impact of a new concert hall or zoo, or hosting the Super Bowl, can also be used to demonstrate that spending on culture has economic consequences. But these studies typically do not consider the opportunity cost of this spending, nor do they necessarily address the long-term economic development consequences of the region in which they are located.

A good test of the hypothesis that funding the arts will stimulate regional economic development is hard to find. Such a test preferably would include “treatment areas” in which arts and culture receive extensive public support, and “control areas” in which they do not. In the absence of such a real controlled experiment, economists often look for what they like to call a “natural experiment” – in this case, a situation similar to the case described above.

One example of this is the John and Abigail Adams Arts Grant Program in Massachusetts. In 2004, the Massachusetts legislature established the John and Abigail Adams Arts Program for the Creative Economy. Administered by the Massachusetts Cultural Council, this program provides grant funding to communities who have created projects that employ the arts and culture to spur local economic development. The program awarded its first grants in 2005 and since that time has funded approximately two to four dozen projects each year. This program, the oldest and most comprehensive in the United States, has provided funding to a wide variety of cities and towns – large and small; inland and coastal; urban and rural – representing every region of the Commonwealth.

The program has been in existence for a sufficiently long time to examine how communities have reacted to grant availability, and to begin to look at the effect of grant activity on economic development and the development of the cultural community. Grants awarded in this program are not large (ranging between approximately $1 and $2 million total distributed each year). With the aid of a unique dataset we (1) investigate whether municipalities that actively participated in the program possess a different socioeconomic profile than municipalities that did not, (2) profile the grant implementation process in three communities, and (3) examine how the most active communities in seeking grants have evolved since the onset of the program in mid-decade.

Do Cultural Tax Districts Buttress Revenue Growth for Budding Arts Organizations? Evidence from the Scientific and Cultural Facilities District

Lauren Schmitz, The New School for Social Research

What role should the government play in financing the arts in America? A wealth of research has been dedicated to whether lump-sum government transfers to nonprofit organizations "crowd-out" private giving. However, little attention has been paid to the incidence of voter-approved cultural sales tax districts in the U.S. and the effect they have on the future success and sustainability of participating organizations. This study uses a natural experiment approach to evaluate the effect that the Scientific and Cultural Facilities District (SCFD)—the largest cultural tax district in the US—has on private and program-related revenues for the over 300 organizations that receive annual support from its proceeds. Results show that after controlling for other countervailing factors, being a small arts organization in the district increases total revenue by $3.66 million compared to other regional organizations inside and outside of the district. Most importantly, these same organizations also crowd in $2.17 million in earned revenue and $1.6 million in private giving. This finding suggests that SCFD funding may have a positive influence on the future growth and sustainability of nascent cultural institutions.

Do Art Galleries Transform Neighborhoods?

Jenny Schuetz, University of Southern California

New York City is often held up as a successful example of arts-led economic development: over the past half-century, concentrations of avant-garde artists and galleries have formed in the previously sketchy but now trendy neighborhoods of Greenwich Village, SoHo, the East Village, and Chelsea. Case studies have documented the succession of artists and galleries followed by yuppies and boutiques in some of these neighborhoods, and some researchers have used these examples to argue that the arts can spur gentrification. An alternative explanation is that galleries choose to locate in neighborhoods with a higher level of exogenous amenities. In this paper, I combine data on the location of Manhattan art galleries with land-use and building stock characteristics to examine whether galleries lead to physical changes in surrounding neighborhoods. Results suggest that galleries do locate in neighborhoods with more exogenous amenities, particularly high-quality building stock, retail-friendly zoning and cultural institutions. The analysis indicates that galleries are not associated with changes in building stock or land use at the Census tract level, while results at the block level are mixed.